

CLAIMS:

1. A process for the aerobic-thermophilic stabilization and disinfection of sludge, wherein:
 - a) raw sludge having a dry matter content of from 3 to 7 % by weight is fed to a first stage, where said raw sludge remains during an average retention time of from four to ten days at temperatures of at least 42 °C with the introduction of an oxygen-containing gas to obtain a partially stabilized sludge;
 - b) said partially stabilized sludge is fed to a second stage in which said partially stabilized sludge is further stabilized and disinfected during an average retention time which is 30 to 70 % of the average retention time of the first stage at temperatures of above 50 °C with the introduction of an oxygen-containing gas.
2. The process according to claim 1, wherein the average retention time in the first stage is from five to six days.
3. The process according to claim 1, wherein the average retention time in the second stage is from 2.5 to three days.
4. The process according to claim 1, wherein the first and second stages are performed in separate tanks.
5. The process according to claim 4, wherein the number of tanks for the first stage is higher than the number of tanks of the second stage.
6. The process according to claim 1, wherein air is supplied as said oxygen-containing gas in the stages, wherein the aeration intensity and/or aeration time of the supplied gas are controlled.

7. The process according to claim 6, wherein the amount of raw sludge, the redox potential or oxygen content in the sludge and the oxygen content or CO₂ content of the exhaust gas are employed as measured and controlled quantities for the oxygen supply.

5 8. The process according to claim 1, wherein the temperature in the first and second stages is controlled by supplying or withdrawing heat.

9. The process according to claim 1, wherein the temperature in the first stage does not exceed 60 °C.

10 10. The process according to claim 1, wherein the temperature in the second stage does not exceed 65 °C.

11. The process according to claim 1, wherein the temperature in the second stage is within a range of from 55 to 60 °C.

12. The process according to claim 1, wherein the temperature in the first stage is at least 45 °C.

15 13. The process according to claim 1, wherein the stabilized and disinfected sludge is subsequently further treated physically, chemically and/or biologically.

14. The process according to claim 1, wherein exhaust gas released from the process is recovered and treated physically, chemically and/or biologically.